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EXAMINER	
MCCALISTER, WILLIAM M	
ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/597,525	KEENE ET AL.	
	Examiner	Art Unit	
	WILLIAM MCCALISTER	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 September 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24,26-36,38-47 and 49-61* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24,26-36,38-47 and 49-61* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/7/2010*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Application has been re-assigned to the Examiner whose contact information can be found at the end of this communication.

2. Claims 25, 37 and 48 have been cancelled. Claims 11-24, 26-36, 38-47 and 49-61 are pending.

Claim Objections

3. Claim 47 is objected to because of the following informalities: erroneous dependency of claim 47 renders insufficient antecedent basis for the phrase "the actuator". Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The disclosure is insufficient to enable one of skill, without undue experimentation, to make a pin block with six pin valves substantially equidistant from each other as

claimed. Even as disclosed in the arrangement of Figure 5, the six pins are not equidistant from each other.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 introduces "a pin valve". Claim 9 refers back to this pin valve, and further requires "a pin valve". It is unclear whether claim further defines the pin valve of claim 1 or requires another, second "pin valve".

8. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 introduces "a pin valve seat". Claim 11 introduces "a pin valve seat". It is unclear whether claim 11 further defines the "pin valve seat" of claim 1, or requires another, second "pin valve seat".

9. Claim 45 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 38 introduces "a valve pin". Claim 45 introduces "a pin". It is unclear whether claim 45 further defines the "valve pin" of claim 38, or requires another, second "pin".

Claim Rejections - 35 USC § 102

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1-9, 11, 12 and 15 as understood are rejected under 35 U.S.C. 102(b) as being anticipated by Tchebinyayeff (US 4,306,587).

Regarding claim 1, Tchebinyayeff discloses a pin valve assembly comprising:

a pin block (upper member 6, as shown in FIG 1) housing a valve pin (8);

a fluid plate (1) with a fluid channel (4) for fluidically communicating with the valve pin;

a fitting block (lower member 6, as shown in FIG 1) housing a fitting (8) for fluidic communication with the fluid plate and for fluidic communication with fluidic components; and

a pin valve seat (10) in communication with the fluid channel and aligned to receive the valve pin, wherein when the valve pin is seated in the pin valve seat (as shown in FIG 1), the flow of fluid in the fluid channel of the fluid plate is substantially blocked (i.e., the valve is closed).

Regarding claim 2, Tchebinyayeff discloses a fitting port (4) aligned with the fitting.

Regarding claim 3, Tchebinyayeff discloses wherein the fitting port is integrated into the fluid channel of the fluid plate (see FIG 1).

Regarding claims 4 and 5, Tchebinyayeff discloses wherein the pin valve seat is integrated into the fluid channel of the fluid plate, and wherein the fitting port is integrated into the fitting (by virtue of the connecting screws, all components are integrated during assembly).

Regarding claim 6, Tchebinyayeff discloses the pin valve seat to be fitted to the valve pin (as shown in FIG 1).

Regarding claims 7, Tchebinyayeff discloses wherein the fitting block is coupled to the pin block with the fluid plate positioned between the pin block and fitting block (see Fig. 1).

Regarding claim 8, Tchebinyayeff discloses wherein the fitting block is coupled to the pin block by a screw connection (see FIG 1).

Regarding claim 9, Tchebinyayeff discloses a [second] pin valve (7, see FIG 2 and col. 3 lines 8-13) having a pin with distal and proximal ends substantially axially disposed in a housing.

Regarding claim 11, Tchebinyayeff discloses wherein the valve pin is actuated by an actuator (14) to provide for a distal end of the valve pin (8) to sit in a pin valve seat (10)

substantially sealing the fluid channel (4) and removing the distal end of the pin valve from the pin valve seat opening the fluid channel.

Regarding claim 12, Tchebinyayeff discloses the use of six pins, wherein the pin blocks house six pin valves substantially equidistant from each other around the circumference of the pin block aligned with six pin valve seats on the fluid plate (see FIG 2 and col. 3 lines 8-13).

Regarding claim 15, Tchebinyayeff discloses wherein each valve pin (8) is in a housing (14, 20, 28, 29) comprising an actuator (14) for axially moving the valve pin to sit on the plate valve seat and substantially block fluid flow from a downstream location (i.e., to close the valve) or remove the pin valve seat and provide for fluid flow to the downstream location (i.e., to open the valve).

12. Claims 18, 22, 24, 26, 32 and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Hammock (US 2,589,373).

Regarding claim 18, Hammock discloses a pin valve assembly comprising:

a pin block (19) for housing a plurality of pin valves (31, 32, 37);

a fluid plate (14)) with a fluid channel (41) for fluidically communicating with the pin valves;

a fitting block (11) for housing fittings for fluidic communication with the fluid plate and for fluidic communication with fluidic components; and

one or more pin valve seats (40) in communication with the fluid channel and aligned to receive the pin valves, wherein when a valve pin (37) of the pin valves is seated in each pin valve seat, the flow of fluid in the fluid channel of the fluid plate is substantially blocked (i.e., the valves are closed).

Regarding claim 22, Hammock discloses the pin valve seats to be integrated into the fluid channel of the fluid plate (i.e., they integrally form a common flow path)

Regarding claim 24, Hammock discloses the pin valve seats to be fitted to the pin valves (see FIG 1).

Regarding claim 26, Hammock discloses wherein each valve pin is housed in a standardized housing (25) comprising a means (29) for actuation for axially moving the valve pin to sit on the pin valve seat and substantially block fluid flow from a downstream location (i.e., to close the valve) or remove the pin from the pin valve seat and provide for fluid flow to the down stream location (i.e., to open the valve).

Regarding claim 32, Hammock discloses the fitting block to be coupled to the pin block with the fluid plate positioned between the fitting block and the pin block (see Fig. 1).

Regarding claim 58, Hammock discloses a method of controlling the flow of a fluid comprising:

providing a fluid plate (14) with a connected fluid channel (analogous to Applicant's, read as the central portions of 41), intersecting pin valve seats (40), and fluidic fitting ports (analogous to Applicant's, read as the bottom conical shaped portions of 41);

supplying fluid to the fluid channel from a fluidic component (inherently, which is attached at portion 12) in communication with the fluidic fitting ports moving the fluid by use of the fluidic components (the fluidic component supplies a conduit for transport of the fluid); and

sealing the fluid channel at selected pin valve seats by impinging on the seats with corresponding valve pins (31, 37).

Claim Rejections - 35 USC § 103

13. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

14. Claims 1-9, 11-13, 15, 18-24, 26, 27, 32-35, 38-47, 49, 55, 56 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paul (US 5,320,139) in view of Tchebinyayeff.

Regarding claim 1, Paul discloses a pin valve assembly comprising:

a pin block (upper member 116, as shown in FIG 3) housing a valve pin (89);

a fluid plate (111) with a fluid channel (100) for fluidically communicating with the valve pin;

a fitting block (lower member 116) housing a fitting (85) for fluidic communication with the fluid plate and for fluidic communication with fluidic components; and

a pin valve seat (10) in communication with the fluid channel and aligned to receive the valve pin, wherein when the valve pin is seated in the pin valve seat (as shown in FIG 1), the flow of fluid in the fluid channel of the fluid plate is substantially blocked (i.e., the valve is closed).

Paul does not disclose a valve pin seat as claimed. Tchebinyayeff teaches that it was known in the art at the time of invention to use a valve pin seat (10) in communication with a similar fluid channel (3, 4) and aligned to receive a similar valve pin (8,9), wherein when the valve pin is seated in the pin valve seat, the flow of fluid in the fluid channel is substantially blocked (i.e., the valve is closed). To increase the operational life of Paul's device, it would have been obvious to use a valve pin and valve pin seat therein, as taught by Tchebinyayeff.

Regarding claim 2, Paul discloses a fitting port (99) aligned with the fitting.

Regarding claim 3, Paul discloses wherein the fitting port is integrated into the fluid channel of the fluid plate (see FIG 3).

Regarding claims 4 and 5, Paul discloses wherein the pin valve seat is integrated into the fluid channel of the fluid plate, and wherein the fitting port is integrated into the fitting (by virtue of the connecting screws, all components are integrated during assembly).

Regarding claim 6, Paul discloses the pin valve seat to be fitted to the valve pin (as shown in FIG 3).

Regarding claim 7, Paul discloses wherein the fitting block is coupled to the pin block with the fluid plate positioned between the pin block and fitting block (see Fig. 3).

Regarding claim 8, Paul discloses wherein the fitting block is coupled to the pin block by a screw connection (112, 113).

Regarding claim 9, Paul discloses a [second] pin valve (see FIG 3) having a pin with distal and proximal ends substantially axially disposed in a housing.

Regarding claim 11, Paul discloses wherein the valve pin is actuated by an actuator (14) to provide for a distal end of the valve pin (8) to sit in a pin valve seat (10) substantially sealing the fluid channel (4) and removing the distal end of the pin valve from the pin valve seat opening the fluid channel.

Regarding claim 12, Paul discloses the use of six pins, wherein the pin blocks house six pin valves substantially equidistant from each other around the circumference of the pin block aligned with six pin valve seats on the fluid plate (see FIG 4 and col. 7 lines 7-16 and col. 3 lines 8-13, the valves are located at the locations of members 143/144 and 145/146, and at least four other, non-labeled but similar locations).

Regarding claim 13, Paul discloses the invention as claimed with exception to the seal ring. However, o-rings were well known in the art at the time of invention as a means for providing a seal between adjacent surfaces, and it would have been obvious to use such an o-ring above the distal end of the pin 89 and within the pin housing 116 for providing sealing of the fluid plate 111 thereat.

Regarding claim 15, Paul discloses wherein each valve pin (89) is in a housing (116) comprising an actuator (90) for axially moving the valve pin to sit on the plate valve seat and substantially block fluid flow from a downstream location (i.e., to close the valve) or remove the pin valve seat and provide for fluid flow to the downstream location (i.e., to open the valve).

Regarding claim 18, Paul discloses a pin valve assembly comprising:

a pin block (upper member 116, see FIG 3) for housing a plurality of pin valves;

a fluid plate (111) with a fluid channel (100) for fluidically communicating with the pin valves;

a fitting block (lower member 116) for housing fittings for fluidic communication with the fluid plate and for fluidic communication with fluidic components; and

one or more pin valve seats (40) in communication with the fluid channel and aligned to receive the pin valves, wherein when a valve pin (37) of the pin valves is seated in each pin valve seat, the flow of fluid in the fluid channel of the fluid plate is substantially blocked (i.e., the valves are closed).

Paul does not disclose one or more valve pin seats as claimed. Tchebinyayeff teaches that it was known in the art at the time of invention to use one or more valve pin seats (10) in communication with a similar fluid channel (3, 4) and aligned to receive similar valve pins (8,9), wherein when a valve pin is seated in a pin valve seat, the flow of fluid in the fluid channel is substantially blocked (i.e., the valve is closed). To increase the operational life of Paul's device, it would have been obvious to use a valve pin and valve pin seat therein, as taught by Tchebinyayeff.

Regarding claim 19, Paul discloses fittings (85, 94) housed within the fitting block.

Regarding claim 20, see the analysis of claim 2 immediately above.

Regarding claim 21, see the analysis of claim 3 immediately above.

Regarding claim 22, see the analysis of claim 4 immediately above.

Regarding claim 23, see the analysis of claim 5 immediately above.

Regarding claim 24, see the analysis of claim 6 immediately above.

Regarding claim 26, Paul discloses wherein each valve pin is housed in a standardized housing (see housings of 80/81, FIG 3) comprising a means (90) for actuation for axially moving the valve pin to sit on the pin valve seat and substantially block fluid flow from a downstream location (i.e., to close the valve) or remove the pin from the pin valve seat and provide for fluid flow to the down stream location (i.e., to open the valve).

Regarding claim 27, Paul discloses wherein the valve pin housing is releasably fitted to the pin block by screws (112, 113).

Regarding claim 32, Paul discloses the fitting block to be coupled to the pin block with the fluid plate positioned between the fitting block and the pin block (see Fig. 3).

Regarding claim 33, Paul discloses wherein the pin valve comprises a valve pin (89) with distal and proximal ends substantially disposed in a housing (see housing of parts 80 and 81, FIG 3).

Regarding claim 34, Paul discloses wherein the valve pins are actuated by an actuator (80/81) to provide for a distal end of the valve pin to sit in the pin valve seat substantially sealing the fluid channel and removing the distal end of the pin valve from the pin valve seat opening the fluid channel (as shown in FIG 3).

Regarding claim 35, Paul discloses wherein the actuator is pneumatically operated (pneumatic actuation disclosed in Abstract).

Regarding claim 38, Paul discloses a pin valve assembly comprising:

a pin block (upper 116) housing pin valves (80, 81);

a fluid plate (111) with a fluid channel (100) having channel ends (see Fig. 3);

a fitting block (lower 116) housing fittings (85, 94, 95) with fitting ports (in which the fittings are located, see FIG 3) for fluidic communication with fluidic components.

Paul does not disclose the valve pin seats as claimed. Tchebinyayeff teaches that it was known in the art at the time of invention to use valve pin seats (10) in communication with a similar fluid channel (3, 4) and aligned to receive similar valve pins (8,9), wherein when a valve pin is seated in a pin valve seat, the flow of fluid in the fluid channel is substantially blocked (i.e., the valve is closed). To increase the operational life of Paul's device, it would have been obvious to use a valve pin and valve pin seat therein, as taught by Tchebinyayeff.

Regarding claims 39 and 40, by virtue of connecting members 112-115, all components are integrated during assembly.

Regarding claim 41, Paul discloses wherein the valve pins 89 are aligned with the channels of the fluid plate 111.

Regarding claim 42, Paul discloses wherein the channels of the fluid plate comprise six channels with channel ends (see Fig. 4).

Regarding claim 43, Paul discloses wherein the pin valves align with two channel ends of the fluid plate (see Fig. 3)

Regarding claim 44, Paul discloses wherein the pin valve seats comprise a first passage for fluidic communication with a channel end (upper end of 99) and a second passage for fluidic communication with another channel end (end of channel 100, see Fig. 3).

Regarding claim 45, Paul discloses wherein the pin valves each comprise a pin 89 for substantially blocking fluidic communication between the first and second passage of the pin valve seat.

Regarding claim 46, Paul discloses wherein the pin is actuated to block the first and second passage of the pin valve seat by an actuator 80/81.

Regarding claim 47, Paul discloses wherein the actuator is actuated pneumatically (pneumatic actuation disclosed in Abstract).

Regarding claim 49, Paul discloses wherein each valve pin is housed in a standardized housing (see Fig. 3) releasably fitted to the pin block 116 (housing stop 92 can be removed from pin block).

Regarding claim 55, Paul discloses wherein the valve pins are actuated by an actuator 80/81 to provide for a distal end of the valve pin to sit in a pin valve seat substantially sealing the fluid channel and removing the distal end of the pin valve from the pin valve seat opening the fluid channel.

Regarding claim 56, Paul discloses wherein the actuator is pneumatically operated (pneumatic actuation disclosed in Abstract).

Regarding claim 58, the claimed method would necessarily be performed during the normal and usual operation of Paul's device as modified by Tchebinyayeff.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paul in view of Tchebinyayeff, and further in view of Cooper et al. (US 5,713,333)

Paul discloses the claimed invention except wherein the distal end of the pin has a diamond-like carbon coating. Cooper et al., however, teach the use of amorphous (diamond-like) carbon coatings of moving parts of valves for the purpose of providing low coefficients of friction and high thermal expansion coefficients and high hardness similar to that of ceramics (Col. 8 Lines 3-9). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the pin disclosed by Paul et al. so that the distal end has a diamond-like carbon coating, as taught by Cooper et al., valves for the purpose of providing low coefficients of friction and high thermal expansion coefficients and high hardness similar to that of ceramics.

16. Claims 14, 16, 17, 36, 57 and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paul in view of Tchebinyayeff, and further in view of Hauck (US 6,012,487).

Regarding claims 14, 36, 57 and 59, Paul discloses the claimed invention except wherein the fluidic components are an HPLC system pump syringe, pump, column sample loop and sample syringe. Hauck, however, teaches that a "typical environment" in which selector valves are used in an HPLC system with fluidic components including HPLC system pump syringe (Col. 1 Lines 30-32), pump34, column 42, sample loop 103

and sample syringe 39. Given that the Hauck teaches that an HPLC system pump syringe, pump, column sample loop and sample syringe are a typical HPLC environment, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the fluidic components disclosed by Paul et al. to comprise an HPLC system pump syringe, pump, column sample loop and sample syringe, as taught by Hauck, for the purpose of using the fluid delivery system in a liquid chromatography application.

Regarding claims 16 and 17, Paul discloses a sleeve load seal 87 and pin seals 86. Paul et al. fail to disclose a belleville spring, and a nut seal around a distal end of a pin below a load ring, and a second belleville spring and a nut above the load ring and the pin seals are two polyetheretherketone washers surrounding a polytetrafluoroethylene washer. Hauck, teaches the use of a seal for pin 27 which comprises a belville spring, a nut seal around a distal end of the pin 27 (which would be under the lower end of a load ring when installed upwardly as see in Figs. 14-15), wherein the pin seals are two washers surrounding another washer (see Fig. 2). Given the teaching of the claimed sealing system in a similar multi-route selector valve system, it would have been obvious to modify the sealing system disclosed by Paul et al. to comprise a belleville spring, and a nut seal around a distal end of a pin below a load ring, wherein the pin seals are two washers surrounding another washer, for the purpose of providing a suitable seal. Furthermore, the claimed arrangement does not provide any unexpected

results in comparison to the system disclosed by Paul et al. and is merely a functional alternative.

Regarding the limitation of there being a second belville spring and nut, these limitations are mere duplicates of the first spring and nut. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a second spring and nut, for the purpose of providing further support and force on the pins, since It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

Regarding the limitation wherein the washers are polyetheretherketone (PEEK) surrounding polytetrafluoroehtylene (PTFE), it would have been obvious to modify the washers to be made of these materials, as PEEK is a well known non-corroding and low friction material, and PTFE is a well known sealing and shock absorbing material. Furthermore, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Regarding claim 60, Hauck further teaches wherein during a load stage the fluid channel is open for fluidic communication from the sample syringe through the sample loop and from the sample loop through the system syringe; and during an inject stage the fluid channel is open for fluidic communication from the pump through the sample loop and from the sample loop through the column (see Col. 1 lines 37-43). Although Hauck fails to explicitly teach that during the load stage the fluid channel is sealed from

fluidic communication from the sample loop to the pump, from the sample loop to the column and from the sample syringe to the pump syringe and during the inject stage the fluid channel is sealed from fluidic communication from the pump through the column and from the sample syringe through the sample loop and from the sample loop through the pump syringe, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to seal off undesired flow paths.

Regarding claim 61, Hauck further teaches wherein during a load stage the pin valves provide for a fluid sample to be transferred from the sample syringe and loaded into the sample loop by a pressure difference created by the syringe 39 (Col. 1 Lines 38-39) and during an inject stage the pin valves provide for the sample to be injected from the sample loop into the column by a pressure difference created by the pump (high pressure is disclosed, in the inject position the only pressure source is the pump).

17. Claims 28-31 and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paul in view of Tchebinyayeff, and further in view of Wylie et al. (US 5,950,674) and Achener et al. (US 4,045,343)

Regarding claims 28-31 and 50-53, Paul discloses the claimed invention except wherein the fluid plate is stainless steel with a flat tetrafluoroethylene (TFE) shim/coating on its surface that is impinged by the pin and the fitting block. Wylie et al, however, teach the use a selector valve having fluid plates 120 which are made of stainless steel coated

with a highly inert material for the purpose of providing a strong non-corroding part for application in which the controlled fluid must come into contact with inert materials. Achener et al. teach that Teflon (a trade name of PTFE) is a tough flexible material that is self lubricating (Col. 10 Lines 31-44). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the fluid plate disclosed by Paul et al. to be stainless steel with a flat coating, as taught by Wylie et al., on its surface that is impinged by the pin and the fitting block, wherein the coating is tetrafluoroethylene (TFE), as taught by Achener et al., for the purpose of providing a strong non-corroding part that is tough, flexible and self lubricating, for application in which the controlled fluid must come into contact with inert materials.

Regarding claim 54, Paul discloses wherein the fitting block is coupled with the fluid plate 111 positioned between the pin block and the fitting block (see Fig. 3).

Response to Arguments

18. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection. Hammock and Tchebinyayeff teach the valve pin as argued. Also, modification of Paul as taught by Tchebinyayeff would result in the valve pin as argued.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM MCCALISTER whose telephone number is (571)270-1869. The examiner can normally be reached on m-f, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hepperle can be reached on (571)272-4913. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WILLIAM MCCALISTER/
Examiner, Art Unit 3753

/STEPHEN HEPPERLE/
Supervisory Patent Examiner, Art Unit 3753

9/30/2010